Claims

1.   A system for communicating data with a communication unit associated with a first user comprising:

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   a host server; and

   a communication server, in communication with the host server and communication unit, comprising a data transfer

10   manager operable for controlling communication of data between the communication unit and host server including filtering data from the host server based on at least one user-definable filter parameter.

15   2.   The system of claim 1, wherein the host server is a host client-server program operating on a host processor, and the host processor is in communication with the communication server via a wide area network (WAN) communication channel.

20   3.   The system of claim 1, wherein the communication server and communication unit are coupled by a first communication channel including a wireless communication channel.

25   4.   The system of claim 1, wherein the data transfer manager further comprises a virtual session manager adapted to control communication of data between the communication unit and host server by communicating the data via a sessionless-oriented communication protocol over a first

30   communication channel between the virtual session manager and the communication unit, and by communicating the data via a session-oriented communication protocol between the virtual session manager and the host server.

5. ~~The system of claim 1, wherein the communication~~ server further comprises a user profile store storing the filter parameter, and the data transfer manager is further operable for determining the filter parameter from the user profile store and communicating the filter parameter to the host server, the host server being operable for applying the filter parameter to determine whether to transfer to the communication server a first data unit addressed to the communication unit.

6. The system of claim 5, wherein the data transfer manager further comprises a query manager operable for determining the filter parameter from the user profile store and communicating a query object including the filter parameter to the host server, the host server being operable for applying the filter parameter to filter the first data unit before transferring the first data unit to the communication server.

7. The system of claim 6, wherein the communication server further comprises a summary database for storing identifying information about filtered data units, the host server being operable for sending identifying information of a second data unit when, after applying the filter parameter, the second data unit is determined to match the filter parameter, the query manager being operable for storing the identifying information of the second data unit in the summary database and sending the identifying information of the second data unit to the communication unit.

8.   The system of claim 1, wherein the host server is an electronic mail post office operating on a host processor, the first and second data units are first and second email

5   messages, and the filter parameters are at least one of a group consisting of an author name, priority level, mail date, message size, and subject word.

9.   The system of claim 1, wherein the host server and

10   communication server are different programs operating on a same host processor

10.   The system of claim 1, wherein the host server is one of a group consisting of an electronic mail post office, a client-

15   server host, a multimedia application host, and a voice processor.

11.   A method of communicating data between a first data processing device and a third data processing device via a

20   second data processing device, comprising:

(a)   at the second data processing device, controlling communication of the data between the first data processing device and third data processing device including filtering of

25   the data from the first data processing device based on at least one user-definable filter parameter.

12. The method of claim 11, wherein:

step (a) further comprises determining at least one filter parameter from a user profile store and communicating the at least one filter parameter to the first data processing device; and

(b) at the first data processing device, applying the at least one filter parameter to determine whether to transfer to the second data processing device a first data unit addressed to the third data processing device.

13. The method of claim 12, wherein the second data processing device further comprises a data transfer manager operable for determining the at least one filter parameter from the user profile store and step (a) further comprises the data transfer manager communicating a message including the at least one filter parameter to the first data processing device; and step (b) comprises applying the at least one filter parameter to filter the first data unit before transferring the first data unit to the second data processing device.

14. The method of claim 13, wherein the at least one filter parameter is at least one of the group consisting of a name parameter, a priority level parameter, a date range parameter, a maximum data unit size parameter, a subject key word parameter, and an attachment parameter, and step (b) further comprises determining whether a portion of the first data unit matches the at least one filter parameter and not sending the first data unit to the second data processing device when there is a match of any of the at least one filter parameter.

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15. The method of claim 14, wherein the at least one filter parameter comprises the maximum data unit size parameter and step (b) further comprises, when there is a match of the maximum data unit size parameter, modifying the first data

5   unit by truncating a size of the first data unit to a maximum size specified in the maximum data unit size parameter and transferring the modified first data unit to the second data processing device.

10   16. The method of claim 14, wherein the at least one filter parameter comprises the attachment parameter and step (b) further comprises, when there is a match of the attachment parameter, modifying the first data unit by stripping an attachment of the first data unit and transferring the modified

15   first data unit to the second data processing device.

17. The method of claim 14, wherein the second data processing device further comprises a summary database for storing identifying information about filtered data units, and:

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step (b) further comprises determining that a portion of the first data unit matches the at least one filter parameter, determining first identifying information about the first data unit and sending the first identifying information to the second

25   data processing device; and

(c) the second data processing device storing the first identifying information in the summary database and sending the first identifying information to the third data processing

30   device.

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~~18. The method of claim 13, wherein the at least one filter~~ parameter is at least one of the group consisting of a name parameter, a priority level parameter, a date range parameter,

5 a maximum data unit size parameter, a subject key word parameter, and an attachment parameter, and step (b) further comprises determining whether a portion of the first data unit matches the at least one filter parameter and sending the first data unit to the second data processing device when there is a

10 match of any of the at least one filter parameter.

19. The method of claim 11, wherein step (a) further comprises:

15 (i) receiving a first data unit from the first data processing device;

(ii) determining at least one filter parameter from a user profile store; and

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(iii) applying the at least one filter parameter to determine whether to transfer the first data unit to the third data processing device.

25 20. The method of claim 19, wherein step (a)(iii) further comprises determining whether a portion of the first data unit matches the at least one filter parameter and not sending the first data unit to the third data processing device when there is a match of any of the at least one filter parameter.

21.　The method of claim 19, wherein the second data processing device further comprises a data transfer manager operable for determining the at least one filter parameter

5   from the user profile store and step (a)(iii) further comprises applying the at least one filter parameter to filter the first data unit before transferring the first data unit to the third data processing device.

10   22.　The method of claim 21, wherein the at least one filter parameter is at least one of the group consisting of a name parameter, a priority level parameter, a date range parameter, a maximum data unit size parameter, a subject key word parameter, and an attachment parameter, and step (a)(iii)

15   further comprises determining whether a portion of the first data unit matches the at least one filter parameter and not sending the first data unit to the second data processing device when there is a match of any of the at least one filter parameter.

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23.　The method of claim 22, wherein the at least one filter parameter comprises the maximum data unit size parameter and step (a)(iii) further comprises, when there is a match of the maximum data unit size parameter, modifying the first

25   data unit by truncating a size of the first data unit to a maximum size specified in the maximum data unit size parameter and transferring the modified first data unit to the third data processing device.

24. The method of claim 22, wherein the at least one filter parameter comprises the attachment parameter and step (a)(iii) further comprises, when there is a match of the attachment parameter, modifying the first data unit by stripping an attachment of the first data unit and transferring the modified first data unit to the second data processing device.

25. The method of claim 19, wherein step (a)(iii) further comprises determining whether a portion of the first data unit matches the at least one filter parameter and sending the first data unit to the third data processing device when there is a match of any of the at least one filter parameter.

26. The method of claim 19, further comprising, prior to step (a), establishing a virtual communication session between the first data processing device and third data processing device, and establishing a communication session between the second data processing device and the third data processing device; and communicating the data between the first and second data processing devices by communicating the data via a sessionless-oriented communication protocol over a first communication channel between the first and third data processing devices, and by communicating the data via a session-oriented communication protocol over a second communication channel between the second and third data processing devices.

27. The method of claim 26 wherein:

the first data processing device is a first user device, the second data processing device is a host processor, and the third data processing device is a communications server, and

the step of communicating data between the communications server and the user device comprises communicating the data via a wireless communication channel and the data is one of a group consisting of an email message, a text file, a database file, a graphics file, a voice file, and a control message.

28. A communications server adapted for communicating with a host server and a communication unit including a processor, the communications server comprising:

(a) a user parameter store adapted to store user parameters; and

(b) a data transfer manager, coupled with the user parameter store, adapted to control communication of data between the communication unit and host server including filtering of the data from the host server based on at least one user-definable filter parameter stored in the user parameter store.

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29.   The communications server of claim 28, wherein the data transfer manager comprises a prestage filter manager determining the filter parameter from the user parameter

5   store and communicating the at least one filter parameter to the host server, the host server being operable for applying the at least one filter parameter to determine whether to transfer to the communications server a first data unit addressed to the communication unit.

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30.   The communications server of claim 28, wherein the data transfer manager further comprises a query manager determining the at least one filter parameter from the user parameter store and communicating a query object including

15   the at least one filter parameter to the host server, the host server being operable for applying the at least one filter parameter to filter a first data unit before transferring the first data unit to the communications server.

20   31.   The communications server of claim 30, wherein the communications server further comprises a summary database storing identifying information about filtered data units, the host server being operable for sending identifying information of the first data unit when, after applying the at least one

25   filter parameter, the first data unit is determined to match the at least one filter parameter, the query manager further storing the identifying information of the second data unit in the summary database and sending the identifying information of the first data unit to the communication unit.

32. The communications server of claim 28, wherein the data transfer manager further comprises a prestage filter manager determining the at least one filter parameter from the user parameter store and applying the at least one filter parameter to a first data unit from the host server to determine whether to transfer the first data unit to the communication unit.

33. The communications server of claim 28, wherein the at least one filter parameter is at least one of a group consisting of a name parameter, a priority level parameter, a date range parameter, a maximum data unit size parameter, a subject key word parameter, and an attachment parameter, and the data transfer manager further comprises a prestage filter manager determining the at least one filter parameter from the user parameter store and applying the at least one filter parameter to a first data unit to determine whether a portion of the first data unit matches the at least one filter parameter and not sending the first data unit to the communication unit when there is a match of any of the at least one filter parameter.

34. The communications server of claim 33, wherein the host server and communications server are different programs operating on a same host processor.

35. A data transfer manager of a communication unit adapted for sending data to a communications server for further transfer to a further data processing device, the data transfer

5   manager comprising:

(a)   a user profile store adapted to store user parameters including at least one filter parameter; and

10   (b)   a prestage filter manager, coupled with the user profile store, and operable for controlling communication of the data between the communication unit and host server by applying the at least one filter parameter to the data.

15   36.   The data transfer manager of claim 35, wherein the at least one filter parameter is at least one of the group consisting of a name parameter, a priority level parameter, a date range parameter, a maximum data unit size parameter, a subject key word parameter, and an attachment parameter, and

20   the prestage filter manager is further operable for determining whether a portion of a first data unit matches the at least one filter parameter and not sending the first data unit to the communications server when there is a match of any of the at least one filter parameter.

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37.   The data transfer manager of claim 35, wherein the prestage filter manager is further operable for applying the at least one filter parameter to a first data unit to determine whether to transfer the first data unit to the communications

30   server.

38.   The data transfer manager of claim 37, wherein the at least one filter parameter comprises a maximum data unit size parameter and the prestage filter manager is further operable

5   for determining when there is a match of the maximum data unit size parameter with a size of the first data unit and modifying the first data unit by truncating the first data unit to a maximum size specified in the maximum data unit size parameter, and transferring the modified first data unit to the

10   communications server.

39.   The data transfer manager of claim 37, wherein the at least one filter parameter comprises an attachment parameter and the prestage filter manager is further operable for

15   determining when there is a match of the attachment parameter with the first data unit and modifying the first data unit by stripping an attachment from the first data unit, and transferring the modified first data unit to the communications server.

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